

## PATENT COOPERATION TREATY

PCT

**NOTIFICATION CONCERNING  
THE FILING OF AMENDMENTS OF THE CLAIMS**  
(PCT Administrative Instructions, Section 417)

From the INTERNATIONAL BUREAU

To:

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<b>Date of mailing</b> (day/month/year) 09 May 2005 (09.05.2005)	<b>IMPORTANT NOTIFICATION</b>
<b>Applicant's or agent's file reference</b> P895-PCT	
<b>International application No.</b> PCT/JP2004/016066	<b>International filing date</b> (day/month/year) 22 October 2004 (22.10.2004)
<b>Applicant</b> NIPPON STEEL CORPORATION et al	

1. The applicant is hereby notified that amendments to the claims under Article 19 were received by the International Bureau on:

20 April 2005 (20.04.2005)

2. This date is within the time limit under Rule 46.1.

Consequently, the international publication of the international application will contain the amended claims according to Rule 48.2(f), (h) and (i).

3. The applicant is reminded that the international application (description, claims and drawings) may be amended during the international preliminary examination under Chapter II, according to Article 34, and in any case, before each of the designated Offices, according to Article 28 and Rule 52, or before each of the elected Offices, according to Article 41 and Rule 78.

<p>The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland</p> <p>Facsimile No. (41-22) 338.70.10</p>	<p>Authorised officer</p> <p><i>Akiko KOYAMA</i></p> <p>Akiko KOYAMA (Fax 338 7010)</p> <p>Telephone No. (41-22) 338 8023</p>
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TO THE INTERNATIONAL BUREAU OF THE WORLD  
INTELLECTUAL PROPERTY ORGANIZATION  
34, Chemin des Colombettes  
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ART. 19(1) AMENDMENT

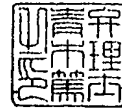
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(Our Ref.: P895-PCT)

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The applicant requests amendment of the claim of the present international application, based on Article 19(1), of the PCT, and transmits herewith a newly amended claim. We believe the amendment does not go beyond the disclosure in the original international application. An outline of the amendment is as follows.

(a) Original claims 1 - 10 are amended.

(b) Original claim 11 is deleted.

CLAIM

1. (Amended) A large-heat-input butt-welded joint of welded structures prepared by butt-welding high-strength steel plates over 50 mm in thickness, having  
5 excellent brittle fracture resistance, is characterized by:

(a1) the hardness of the weld metal is not more than 110% of the hardness of the base metal.

2. (Amended) A large-heat-input butt-welded joint  
10 of welded structures prepared by butt-welding high-strength steel plates over 50 mm in thickness, having excellent brittle fracture resistance, is characterized by:

(a2) the hardness of the weld metal is not less  
15 than 70% and not more than 110% of the hardness of the base metal.

3. (Amended) A large-heat-input butt-welded joint of welded structures prepared by butt-welding high-strength steel plates over 50 mm in thickness, having  
20 excellent brittle fracture resistance, is characterized by:

(a1) the hardness of the weld metal is not more than 110% of the hardness of the base metal, and

(b) the width of the weld metal is not more  
25 than 70% of the plate thickness of the base metal.

4. (Amended) A large-heat-input butt-welded joint of welded structures prepared by butt-welding high-strength steel plates over 50 mm in thickness, having  
30 excellent brittle fracture resistance, is characterized by:

(a2) the hardness of the weld metal is not less than 70% and not more than 110% of the hardness of the base metal, and

(b) the width of the weld metal is not more  
35 than 70% of the plate thickness of the base metal.

5. (Amended) A large-heat-input butt-welded joint of welded structures prepared by butt-welding high-

strength steel plates over 50 mm in thickness, having excellent brittle fracture resistance, is characterized by:

5 (a1) the hardness of the weld metal is not more than 110% of the hardness of the base metal,

(b) the width of the weld metal is not more than 70% of the plate thickness of the base metal, and

10 (c) the width of the region affected by welding whose hardness is softened to not more than 95% of the hardness of the non-heat-affected base metal has a width not less than 5 mm.

6. (Amended) A large-heat-input butt-welded joint of welded structures prepared by butt-welding high-strength steel plates over 50 mm in thickness, having  
15 excellent brittle fracture resistance, is characterized by:

(a2) the hardness of the weld metal is not less than 70% and not more than 110% of the hardness of the base metal,

20 (b) the width of the weld metal is not more than 70% of the plate thickness of the base metal, and

(c) the width of the region affected by welding whose hardness is softened to not more than 95% of the hardness of the base metal unaffected by heat has  
25 a width not less than 5 mm.

7. (Amended) A large-heat-input butt-welded joint of welded structures prepared by butt-welding high-strength steel plates over 50 mm in thickness, having excellent brittle fracture resistance, is characterized  
30 by:

(a1) the hardness of the weld metal is not more than 110% of the hardness of the base metal,

(c) the width of the region affected by welding whose hardness is softened to not more than 95%  
35 of the hardness of the base metal unaffected by heat has a width not less than 5 mm, and

(d) the prior austenite grain size in the

heat-affected zone (HAZ) contacting the welding fusion line is not more than 200  $\mu\text{m}$ .

8. (Amended) A large-heat-input butt-welded joint of welded structures prepared by butt-welding high-  
5 strength steel plates over 50 mm in thickness, having excellent brittle fracture resistance, is characterized by:

(a2) the hardness of the weld metal is not less than 70% and not more than 110% of the hardness of the  
10 base metal,

(c) the width of the region affected by welding whose hardness is softened to not more than 95% of the hardness of the base metal unaffected by heat has a width not less than 5 mm, and

(d) the prior austenite grain size in the heat-affected zone (HAZ) contacting the welding fusion line is not more than 200  $\mu\text{m}$ .

9. (Amended) A large-heat-input butt-welded joint of welded structures prepared by butt-welding high-  
20 strength steel plates over 50 mm in thickness, having excellent brittle fracture resistance, is characterized by:

(a1) the hardness of the weld metal is not more than 110% of the hardness of the base metal,

25 (b) the width of the weld metal is not more than 70% of the plate thickness of the base metal,

(c) the width of the region affected by welding whose hardness is softened to not more than 95% of the hardness of the non-heat-affected base metal has a  
30 width not less than 5 mm, and

(d) the prior austenite grain size in the heat-affected zone (HAZ) contacting the welding fusion line is not more than 200  $\mu\text{m}$ .

10. (Amended) A large-heat-input butt-welded joint of welded structures prepared by butt-welding high-  
35 strength steel plates over 50 mm in thickness, having

excellent brittle fracture resistance, is characterized by:

5 (a2) the hardness of the weld metal is not less than 70% and not more than 110% of the hardness of the base metal,

(b) the width of the weld metal is not more than 70% of the plate thickness of the base metal,

10 (c) the width of the region affected by welding whose hardness is softened to not more than 95% of the hardness of the non-heat-affected base metal has a width not less than 5 mm, and

(d) the prior austenite grain size in the heat-affected zone (HAZ) contacting the welding fusion line is not more than 200  $\mu\text{m}$ .

15 11. (Deleted)

## Explanation for the Amendment under Article 19(1)

### Content of the Amendment

- (a) Original claims 1 - 10 are amended to include original claim 11
- (b) Original claim 11 is deleted

### Explanation

Japanese Patent No.3220406(X patent document) discloses forming a high-strength welded joint excellent in crack resistance on a steel plate of 50 mm in thickness.

On the other hand, the present invention is related to a large-heat-input butt-welded joint.

Therefore, the above amendment, which amends "welded structures" to "welded structures prepared by butt-welding high-strength steel plates over 50 mm in thickness", makes clear the difference between the present invention and Japanese Patent No.3220406(X patent document).